

**CORRECTED VERSION**

**(19) World Intellectual Property  
Organization  
International Bureau**



**(43) International Publication Date**  
**17 March 2005 (17.03.2005)**

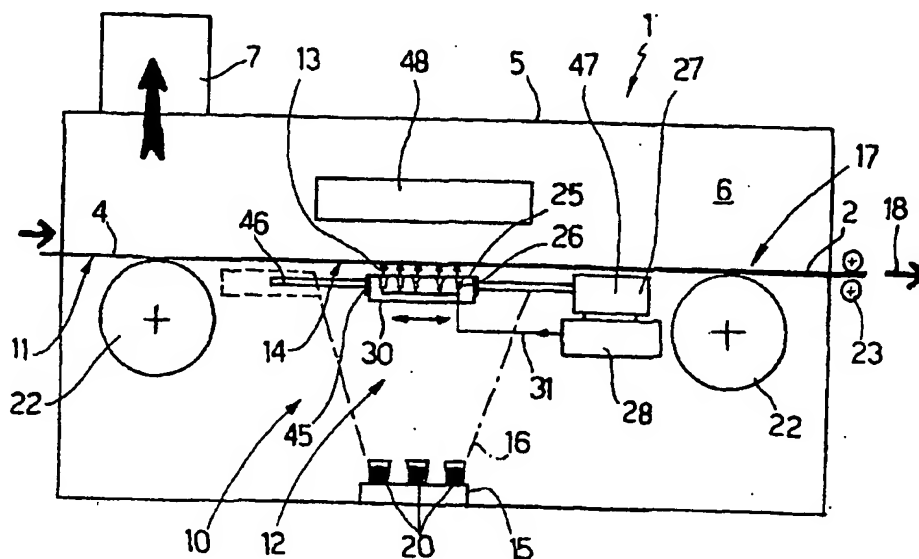
**PCT**

**(10) International Publication Number**  
**WO 2005/024088 A3**

- (51) International Patent Classification<sup>7</sup>: **C23C 14/22**,  
14/56
- (21) International Application Number:  
**PCT/IB2004/002960**
- (22) International Filing Date:  
**10 September 2004 (10.09.2004)**
- (25) Filing Language:  
**Italian**
- (26) Publication Language:  
**English**
- (30) Priority Data:  
**TO2003A000690**  
**11 September 2003 (11.09.2003) IT**
- (71) Applicants (for all designated States except US): **EDISON S.P.A.** [IT/IT]; Foro Buonaparte, 31, I-20121 Milano (IT). **OUTOKUMPU COPPER SUPERCONDUCTORS ITALY S.P.A.** [IT/IT]; Via della Repubblica, 257, I-55052 Fornaci di Barga (IT).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **BALDINI, Alberto** [IT/IT]; Via del Palmierino, 1, I-50137 Firenze (IT). **GAUZZI, Andrea** [IT/IT]; Viale Vittoria, 13, I-43100 Parma (IT). **ZANNELLA, Sergio** [IT/IT]; Via dei Platani, 7, I-22066 Mariano Comense (IT).
- (74) Agents: **CERBARO, Elena et al.**; Studio Torta S.r.l., Via Viotti, 9, I-10121 Torino (IT).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

- (54) Title: A METHOD AND APPARATUS FOR DEPOSITION OF FILMS OF COATING MATERIALS, IN PARTICULAR OF SUPERCONDUCTIVE OXIDES



- (57) Abstract:** There are provided herein a method and an apparatus for deposition of films of coating materials on a substrate, of particular use in obtaining superconductive composite tapes for deposition of films of superconductive oxides and/or buffer layers. A step of deposition of the film (2) on the substrate (4) is associated to a step of gas treatment in situ, in which a flow (13) of gas is sent towards a working surface (14) of the substrate or of the film growing on the substrate. The gas-treatment step is performed via ultrasound expansion nozzles (26).

**WO 2005/024088 A3**